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REQUIREMENTS AND TESTING OF INSTRUMENT LANDING SYSTEM (ILS)
ILS BACK-UP POWER BATTERY
NSN 6140-01-291-6488

1.0. Scope

This document establishes requirements for required battery characteristics, offerer's responsibilities, and quality control tests. These requirements pertain to the production, inspection, test procedures, tests, and records necessary to substantiate that the assembly complies with and performs in accordance with its intended use.

2.0. Purpose

To define item requirements, workmanship criteria, and item testing and evaluation. This document provides the basis of understanding between any offerer and Federal Aviation Administration (FAA) Logistics Center (LC) regarding product requirements and testing.

3.0. Reference Documents

FAA Specification – Wilcox part number# 045047 and drawing number 045047, as well as FAA Specification FAA-E-2826.

Salient Characteristics Per Wilcox 045047 and FAA-E-2826

Type 1, Class-3, Style B, Lead-acid, valve regulated (VRLA), absorbed glass mat (AGM) sealed, maintenance free. Battery must be a switchgear or telecom grade battery. Batteries designed exclusively for UPS systems are not acceptable for this application.

Nominal Voltage: 12 volts, DC

Nominal Capacity: 100 Amp Hours @ 20-hour rate (deep cycle), to 10.5V, based on published data from manufacturer.

Maximum total case dimensions:

Height: less than 10.1 inches
Length: less than 19.8 inches
Width: less than 7.1 inches
Weight: less than 99 pounds

Case material: Flame retardant, self-extinguishing PVC or similar material (UL-94-V0; ASTM D-635)

Vent system: Low Pressure relief vent

Terminal: Threaded copper insert with ¼ x 20, or M6 threads. stainless hex bolt and washer to be included. Top Mount

Electrolyte: 1.3 Specific Gravity @25 C, nominal sulfuric acid

Capacity @ 77 degrees F. to 10.5V

5.0A: greater than or equal to 100 Amp Hour
12.0A: greater than or equal to 96 Amp Hour
15.0A: greater than or equal to 75 Amp Hour
56.0A: greater than or equal to 56 Amp Hour

Capacity @ -4 degrees F., 20-hour rate: greater than or equal to 60 Amp Hour

Constant voltage charge @ 77 degrees F. Cycle: Initial, less than 40 Amps, 14.5V to 14.9V

Float: Initial, less than 40 Amps, 13.50V to 13.62V

Low-pressure relief valve with flash arrestor.

Float Rate: Continuous float service.

Life Expectancy: 10 years

Safety: Flame Arrestor and relief valve for overcharge protection.
Battery Warning Label (hazard advisory).

Carrying and Lifting mechanism: The battery must come with either a permanent or removable device to facilitate lifting the battery into position. The device and attaching mechanism(s) must not violate the dimensional requirements for this battery.

4.0 Requirements

The battery will meet Wilcox Specification for 045047, as well as FAA Specification FAA-E-2826. Item is used in the critical Air Traffic Control environment at national airports to provide power to critical air navigation aides. The Instrument Landing System (ILS) is part of the National Airspace System (NAS) and their reliable operation is essential to the safety and efficiency of aircraft precision approach under all weather conditions.

4.1 WARRANTY
The manufacturer's standard warranty shall apply.

4.2 LABELING
Part shall be marked with Manufacturer's Name, Manufacturer's Part Number and part manufacture date, in a MM/YY format, along with a statement of warranty. Below is a suggested format. All marking shall be permanent and legible for the life of the product, and placed in a clearly visible location on the battery.

xxxxxxxxxxxxxx	xxxxxxxxxx	MM/YY
Manufacturer	Part Number	Mfg Date

This product has a 5 year warranty. If product fails within 5 years of Mfg Date above, call Logistics Center.

4.3 – Total Contract Batteries Required:

Given by the FAALC Purchase Order.

5 - Quality Assurance Provision:

Item will be manufactured and comply with Wilcox specification #045047. The manufacturer shall also comply with MIL-I-45208, as well as FAA-E-2826.

6 – Delivery:

6.1 – Contractor shall provide supporting documentation to establish their product meets the battery life expectancy requirement, e.g. data from life tests of SAE J240 or SAE J2185.

6.2 – Delivery to Site requirements - Contractor shall ship batteries directly to the requesting site at contractor's expense.